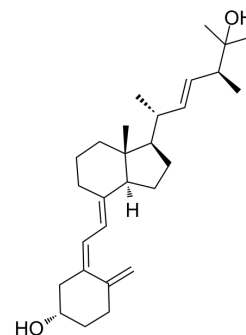


## Ercalcidiol

<b>Cat. No.:</b>	HY-32349
<b>CAS No.:</b>	21343-40-8
<b>Molecular Formula:</b>	C <sub>28</sub> H <sub>44</sub> O <sub>2</sub>
<b>Molecular Weight:</b>	412.65
<b>Target:</b>	VD/VDR; Endogenous Metabolite
<b>Pathway:</b>	Vitamin D Related/Nuclear Receptor; Metabolic Enzyme/Protease
<b>Storage:</b>	-20°C, protect from light, stored under nitrogen * The compound is unstable in solutions, freshly prepared is recommended.



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 200 mg/mL (484.67 mM; ultrasonic and warming and heat to 60°C)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	2.4234 mL	12.1168 mL	24.2336 mL
		5 mM	0.4847 mL	2.4234 mL	4.8467 mL
		10 mM	0.2423 mL	1.2117 mL	2.4234 mL
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.5 mg/mL (6.06 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (6.06 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.5 mg/mL (6.06 mM); Clear solution</li> </ol>				

### BIOLOGICAL ACTIVITY

<b>Description</b>	Ercalcidiol is a metabolite of vitamin D <sub>2</sub> , is regarded as an indicator of vitamin D nutritional status.
<b>IC<sub>50</sub> &amp; Target</b>	Human Endogenous Metabolite
<b>In Vitro</b>	Differentiation between Ercalcidiol (25(OH)D <sub>2</sub> ) and 25(OH)D <sub>3</sub> is important for monitoring vitamin D therapy, as vitamin D <sub>2</sub> is the predominant prescription form. The half-life of Ercalcidiol is shorter than that of 25(OH)D <sub>3</sub> and it binds less well to the vitamin D binding protein, making it less potent and, therefore, required to be administered at much higher doses than vitamin D <sub>3</sub> . Some currently used assays have a diminished capacity to detect Ercalcidiol, which can lead to dangerous overdosing when attempting to monitor therapy with vitamin D <sub>2</sub> <sup>[2]</sup> .

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MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## CUSTOMER VALIDATION

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- Sci Rep. 2022 Feb 22;12(1):3014.

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## REFERENCES

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- [1]. Li L, et al. Performance evaluation of two immunoassays for 25-hydroxyvitamin D. J Clin Biochem Nutr. 2016 May;58(3):186-92.
- [2]. Newman MS, et al. A liquid chromatography/tandem mass spectrometry method for determination of 25-hydroxy vitamin D2 and 25-hydroxy vitamin D3 in dried blood spots: a potential adjunct to diabetes and cardiometabolic risk screening. J Diabetes Sci Technol
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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